

CLAIMS:

1. A method of identifying altered order critical data in a system for conducting electronic commerce over a public data network in which orders are placed by a customer using a computer, the method including the step of:

transmitting an electronic order of the customer over the public data network from the customer computer to a validation server that validates order critical data included in the order, the validation server executing the steps of:

verifying said order critical data; and

generating an indication of the validity or otherwise of the order critical data.

2. The method of claim 1 wherein the indication of whether the order critical data is valid or otherwise includes an indication that the order critical data has been altered in the event that the order critical data is invalid.

3. The method of claim 1 or 2 further including the step of the validation server transmitting the electronic order to at least one relevant merchant for fulfilment in the event that the order critical data is valid.

4. The method of claim 1 or 2 further including the step of the validation server rejecting the electronic order in the event that the order critical data is invalid.

5. The method of claim 1 or 2 further including the validation server executing the steps of:

generating a report including information indicating whether or not said order critical data is valid; and

transmitting the report to one or more relevant merchants receiving the electronic order thus enabling said merchants to identify if order critical data in the electronic order is valid.

6. The method of claim 5 wherein the report includes at least one of a human readable report or a machine readable report suitable for automated processing.
7. The method of any one of claims 1 to 6 wherein orders are placed by the customer using client-side software including one or more program components adapted for execution on the customer's computer.
8. The method of any one of claims 1 to 7 further including the steps of:
  - providing a commerce server for serving product details;
  - the customer downloading product details from the commerce server to the customer computer over the public data network; and
  - generating the electronic order using the product details downloaded from the commerce server.
9. The method of claim 8 wherein the order critical data is included in said product details and is digitally signed with a secret key, and wherein:
  - the step of transmitting includes transmitting the digital signature along with the electronic order; and
  - the step of verifying includes the validation server verifying that the digital signature corresponds with the order critical data.
10. The method of any one of claims 1 to 8 further including the step of associating the validation server with a database including copies of the order critical data, and wherein the step of verifying includes the validation server comparing the order critical data included in the order with the corresponding copy held within the database.
11. The method of any one of claims 1 to 8 further including the step of associating the validation server with a database including copies of the order critical data, and wherein:
  - the step of transmitting the electronic order includes transmitting an order including incomplete order critical data; and

the step of verifying includes the validation server completing the order critical data using the corresponding copy held within the database.

12. The method of claim 8 wherein the order critical data is duplicated in said product details including a first copy in unencrypted form and a second copy encrypted using a secret key, and wherein:

the step of transmitting includes transmitting the encrypted copy of the order critical data along with the electronic order; and

the step of verifying includes the validation server verifying that the encrypted data corresponds with the unencrypted order critical data in the electronic order.

13. The method of claim 8 wherein the step of verifying includes the validation server downloading relevant product details from the commerce server and comparing order critical data in the downloaded product details with the corresponding data in the received electronic order.

14. The method of claim 8 wherein:

the step of transmitting the electronic order includes transmitting an order including incomplete order critical data; and

the step of verifying includes the validation server completing the order critical data using the corresponding copy downloaded from the commerce server.

15. A validation server for identifying altered order critical data in a system for conducting electronic commerce over a public data network in which orders are placed by a customer using a computer, the validation server including:

receiving means for receiving an electronic order of the customer transmitted over the public data network from the customer computer, said electronic order including order critical data;

verifying means for verifying said order critical data; and

indicating means for generating an indication of whether the order critical data is valid or otherwise, to enable altered order critical data to be identified.

16. The validation server of claim 15 further including a report generating means for generating, on the basis of the indication generated by said indicating means, a report including information indicating whether or not said order critical data in the electronic order is valid.

17. The validation server of claim 15 further including rejection means for rejecting the electronic order if said indicating means indicates that the critical data is invalid.

18. The validation server of any one of claims 15 to 17 wherein the receiving means is adapted to receive a digital signature along with the electronic order, the digital signature being the result of digitally signing the order critical data with a secret key, and the verifying means includes means for verifying that the digital signature corresponds with the order critical data.

19. The validation server of any one of claims 15 to 17 wherein the validation server is associated with a database that includes copies of the order critical data, and the verifying means includes means for comparing the order critical data included in the order with the corresponding copy held within the database.

20. The validation server of any one of claims 15 to 17 wherein the validation server is associated with a database that includes copies of the order critical data, the received order includes incomplete order critical data, and the verifying means is adapted to complete the order critical data using the corresponding copy held within the database.

21. The validation server of any one of claims 15 to 17 wherein the receiving means is adapted to receive duplicated order critical data including a first copy in unencrypted form and a second copy encrypted using a secret key and the verifying means includes means for verifying that the encrypted data corresponds with the unencrypted order critical data in the electronic order.

22. The validation server of any one of claims 15 to 17 further including means for connecting to a commerce server and for downloading a copy of product details including order critical data from said commerce server, and wherein the verifying means includes means for comparing the downloaded order critical data with the corresponding data in the received electronic order.

23. The validation server of any one of claims 15 to 17 further including means for connecting to a commerce server and for downloading a copy of product details including order critical data from said commerce server, and wherein the received order includes incomplete order critical data, and the verifying means is adapted to complete the order critical data using the corresponding copy downloaded from the commerce server.

24. A method of operating a validation server, in a system for conducting electronic commerce over a public data network in which orders are placed by a customer using a computer, the method including the steps of:

receiving from the customer computer over the public data network an electronic order of the customer, said electronic order including order critical data; verifying said order critical data; and

generating an indication of the validity or otherwise of the order critical data.

25. The method of claim 24 further including the step of transmitting the electronic order to at least one relevant merchant for fulfilment in the event that the order critical data is valid.

26. The method of claim 24 further including the step of rejecting the electronic order in the event that the order critical data is invalid.

27. The method of claim 24 further including the steps of:

generating a report including information indicating whether or not said order critical data is valid; and

transmitting the report to one or more relevant merchants receiving the electronic order thus enabling said merchants to identify if order critical data in the electronic order is valid.

28. The method of any one of claims 24 to 27 wherein the electronic order includes product details obtained from a commerce server, said product details being digitally signed with a secret key, and wherein the step of verifying includes verifying that the digital signature corresponds with the order critical data.

29. The method of any one of claims 24 to 27 wherein a database including copies of the order critical data is associated with the validation server, and wherein the step of verifying includes comparing the order critical data included in the order with a corresponding copy held within said database.

30. The method of any one of claims 24 to 27 wherein a database including copies of the order critical data is associated with the validation server, and said electronic order includes incomplete order critical data, and wherein the step of verifying includes completing the order critical data using a corresponding copy held within the database.

31. The method of any one of claims 24 to 27 wherein the electronic order includes product details obtained from a commerce server, said product details including a first copy of said order critical data in unencrypted form, and a second copy of said order critical data encrypted using a secret key, and wherein the step of verifying includes verifying that the encrypted data corresponds with the unencrypted order critical data in the electronic order.

32. The method of any one of claims 24 to 27 wherein said electronic order includes incomplete order critical data and the step of verifying includes:

- downloading relevant product details from a commerce server; and
- completing the order critical data using corresponding data included within said product details.

33. A method of a customer placing an order in a system for conducting electronic commerce over a public data network whereby alterations to order critical data are identified, the method including the steps of:

generating an electronic order including order critical data; and

transmitting the electronic order over the public data network to a validation server that verifies said order critical data, and generates an indication of the validity or otherwise of the order critical data.

34. The method of claim 33 wherein the step of generating includes:

downloading relevant product details from a commerce server over the public data network; and

generating the electronic order using the product details downloaded from said commerce server.

35. The method of claim 34 wherein the order critical data is included in said product details and is digitally signed with a secret key, and the step of transmitting includes transmitting the digital signature along with the electronic order, whereby the validation server verifies the order critical data by verifying that the digital signature corresponds with the order critical data.

36. The method of claim 33 wherein the step of transmitting includes transmitting an order including incomplete order critical data, whereby the validation server verifies the order critical data by completing the incomplete data.

37. The method claim 34 wherein the product details include a first copy of the order critical data in unencrypted form and a second copy of the order critical data encrypted using a secret key, and the step of transmitting includes transmitting the encrypted copy of the order critical data along with the electronic order, whereby the validation server verifies the order critical data by verifying that the encrypted data corresponds with the unencrypted order critical data in the electronic order.

38. The method of claim 34 wherein the validation server verifies the order critical data by downloading relevant product details from the commerce server and comparing order critical data in the downloaded product details with the corresponding data in the received electronic order.

39. A client-side software product for use in a customer computer in a system for conducting electronic commerce over a public data network where orders are placed by a customer using a computer, the client-side software product including:

- computer instruction code for generating an electronic order of the customer including order critical data; and

- computer instruction code for effecting transmission of the electronic order over the public data network from the customer computer to a validation server that verifies said order critical data and generates an indication of the validity or otherwise of the order critical data.